

**The Impact of Folk Healers on the Performance
of Malaria Volunteers in Thailand.**

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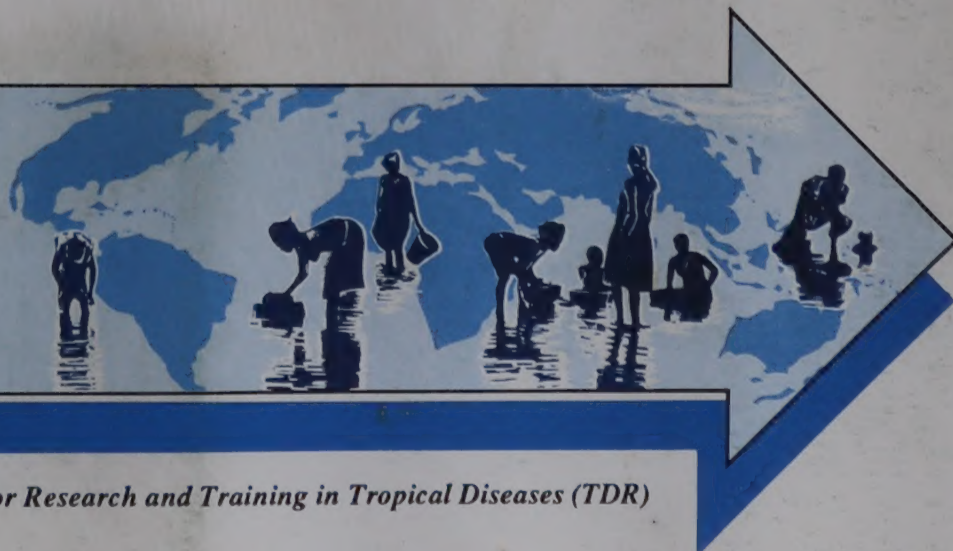
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Bangkok, Thailand

Final report of a project supported by
the TDR Social and Economic Research Component

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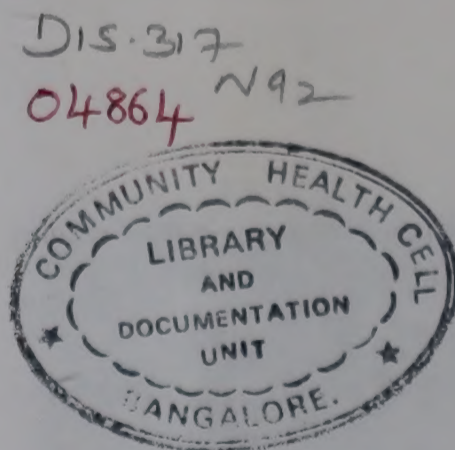


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Foreword

The UNDP/WORLD BANK/WHO Special Programme for Research and Training in Tropical Diseases (TDR) is a globally coordinated effort to bring the resources of modern science to bear on the control of major tropical diseases. The Programme has two interdependent objectives:

- To develop new methods of preventing, diagnosing and treating selected tropical diseases, methods that would be applicable, acceptable and affordable by developing countries, require minimal skills or supervision and be readily integrated into the health services of these countries;
- To strengthen -- through training in biomedical and social sciences and through support to institutions -- the capability of developing countries to undertake the research required to develop these new disease control technologies.

Research is conducted on a global basis by multidisciplinary Scientific Working Groups on the six diseases selected for attack: malaria, schistosomiasis, filariasis (including onchocerciasis), the trypanosomiasis (both African sleeping sickness and the American form, Chagas' disease), the leishmaniasis and leprosy. Scientific Working Groups are also active in the "trans-disease" areas of biological control of vectors, epidemiology, and social and economic research. The training and institution strengthening activities are limited to the tropical countries where the diseases are endemic.

The *Social and Economic Research Project Reports* series represents a new communication venture undertaken by TDR's Social and Economic Research (SER) Component. This series has been launched to facilitate and increase communication among social scientists and researchers in related disciplines carrying out research on social and economic aspects of tropical diseases and to disseminate social and economic research results to disease control personnel and government officials concerned with improving the effectiveness of tropical disease control.

Research reports published in this series are final reports of projects funded by TDR and usually include more material than ordinarily published in peer review journal articles. TDR considers this material to be valuable both for investigators involved in the study of social and economic aspects of tropical diseases and for professionals involved in training programmes in the social sciences, economics and public health. The series should acquaint those working on similar problems with approaches undertaken by others, in order to test new approaches in different settings, and should provide useful information to personnel in disease control programmes and related agencies.

In the interests of rapid dissemination of social and economic research findings, supporting material, e.g., tabulated data, has not been included in the present report. This material is, however, available upon request to interested researchers. All requests for such material, citing in full the number, title and author(s) of the *SER Project Report*, should be addressed to: Dr C. Vlassoff, Secretary, Steering Committee on Social and Economic Research, TDR, World Health Organization, 1211 Geneva 27, Switzerland.

Tore Godal, Director

Special Programme for Research
and Training in Tropical Diseases
TDR

PREFACE

In its thirteen years of existence, the Social and Economic Research (SER) component of the UNDP/World Bank/WHO Special Programme for Research and Training in Tropical Diseases (TDR) has sought to promote and support research which answers questions on the incorporation of social, cultural and economic aspects into the framework and implementation of activities in tropical disease control programmes. One of its programme priorities has been research into community participation, an important tool in making health care accessible, acceptable and affordable in endemic areas, and indispensable for successful control activities.

In Thailand, the malaria control programme has successfully utilized community volunteers as a local resource to provide active surveillance, act as a first line contact with health services and give health education. An innovative component of the volunteer programme is the inclusion of traditional folk healers who are present in nearly every Thai village, well respected and in constant contact with the people.

Dr Okanurak and her colleagues have conducted an excellent comparative study into the merits of folk healer and non-folk healer volunteers as community health workers in the malaria control programme in Thailand. The findings suggest that traditional medicine practitioners are an active, motivated group with great potential for disease control programmes. However, the successful adoption of such an approach would seem to depend on modifications in the selection and training process so that health volunteers do not exceed or abuse their role through overcharging for their services and drug misuse.

Carol Vlassoff, Secretary
Scientific Working Group and Steering Committee
on Social and Economic Research

Special Programme for Research
and Training in Tropical Diseases
TDR

Acknowledgement

This research would not have been possible without generous cooperation from the Department of Communicable Disease Control, particularly the Malaria Division. Special gratitude goes to Dr. Teera Ramasoota, Director General of the Department of Communicable Disease Control, Dr. Somthas Malikul, Deputy Director of the Department of Communicable Disease Control, Dr. Sunchai Ketrangsee, Director of the Malaria Division and Mr. Suporn Kaewkanlaya, Head of the Malaria Sector 7 of Zone 1, Malaria Region 2.

We are particularly grateful to the malaria volunteers and other villagers who gave their enthusiastic cooperation. Without them, this study could not have been conducted.

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SUMMARY

The role of folk healers as village malaria volunteers is controversial since there are both advantages and disadvantages. This study which aimed to elucidate this dilemma, was undertaken in the Malaria Sector 7, Zone 1 in Chiangmai Province. It included 246 volunteers, of whom 113 or 46 percent practiced folk healing either as their main or subsidiary occupation.

Attitudes and perceptions of folk healer and non-folk healer volunteers to the program did not differ much; both groups perceived the need for a malaria volunteer program. However, although they believed that they had gained social respect, about one-third of the non-folk healer-volunteers considered that volunteer work had interfered with their usual activities. A significantly smaller proportion of folk healer volunteers made this claim. Non-folk healer-volunteers were more likely than folk healers to consider dropping out of the program.

The performance of the two groups of volunteers was investigated using the following criteria: a record of taking blood slides regularly for 3 years, the number of slides typically available for examination, the award of a certificate of good performance, and the number of cases detected. The performance of the folk healer-volunteers was superior to that of non-folk healer-volunteers. Moreover, folk healer-volunteers were more likely to seek cases actively by taking blood smears at the villagers' houses, and to take blood slides to the Malaria Clinic for microscopic examination.

Many folk healer-volunteers believed that the increased social respect derived from being a malaria volunteer had increased their income-earning capacity. They treated malaria patients with their own medicines for other ailments and sometimes for malaria, and hypersensitivity and side effects of the drugs were identified as common problems. The villagers, as users, accepted the folk healers as malaria volunteers, but expressed some concern at folk healer malpractice and the high cost of treatment for their other problems.

In this study, folk healers proved to have a better attitude and perform better than non-folk healers as malaria volunteers. However, a policy is needed to cope with some general problems of folk-healer practices, including overuse of drugs and the high cost of treatment. Malaria training courses for folk-healer volunteers need to emphasize the responsibility and boundaries of their healing practices and the dangers resulting from malpractice. Regular monitoring and supervision should be included as policy if folk healers continue to be recruited.

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CHAPTER 1

INTRODUCTION

Rationale

During recent decades, the incidence of malaria appears to have fallen in many parts of Thailand. Malaria specific mortality rates have also declined from 350 per 100,000 population in 1943 to 2.7 per 100,000 population in 1988, at which point the Annual Parasite Rate (API) was only 6.7 per 1,000 population (Ketrangsee and Thimasarn 1989). One of the main objectives of malaria control in the country, as described in the Sixth Health Development Plan, is to prevent malaria in areas of low persistent transmission. Accordingly, the Malaria Division, Ministry of Public Health has launched a surveillance system using a volunteer force recruited from the rural community. Villagers were invited to serve as malaria volunteers to prepare blood smears and give presumptive treatment for fever cases in their own villages. Whenever a volunteer takes a blood smear and gives presumptive treatment, he or she has to fill out a report form for passive case detection. In addition, a volunteer is expected to give malaria education. These volunteer activities have saved the government considerable expense and enhanced the coverage of case detection. At the same time, villagers can get treatment much earlier than if they had to travel to distant malaria clinics.

The large scale recruitment of villagers as malaria volunteers in Thailand followed a successful initial trial in 1961 at Hang Dong District of Chiangmai Province, northern Thailand, which showed that village volunteers were able to assist in case detection, leading to increased case finding. It was claimed that, with the cooperation of a health center and malaria volunteers, over 85% of malaria cases in a district could be detected (Chitprarop 1982). Latest information from the Malaria Division (1988) revealed that there were 40,347 malaria volunteers distributed in 34,548 villages over the country. The 1987 surveillance report of malaria showed that 18% of the 7,287,108 slides that were taken, were contributed by the volunteers, accounting for 28,665 confirmed cases, or 9.5 percent of the total cases of malaria detected in the country (Table 1).

Table 1 Surveillance report of malaria in Thailand*

All regions	Malaria clinic	Volunteer	Health Institute	Others**	Total
No. exam contribution to total (%)	986,206 13.5	1,303,736 17.9	1,655,609 22.7	3,341,557 45.9	7,287,108 100.0
No. positive cases % positive	158,703 52.4	28,665 9.5	76,588 25.3	38,715 12.8	302,671 100.0

* Adapted from the Malaria Division Report of 1987, p. 78.

** Active case detection + Special case detection + Mass blood survey.

Malaria volunteers have, therefore, contributed to the malaria surveillance system of Thailand. Nevertheless, there are some problems in this program, the major ones being the high drop-out rate of volunteers and inactive volunteers. These problems have been elucidated to a certain extent in the study on Village Malaria Volunteers in Thailand: An Anthropological Approach (Okanurak 1986). Several variables were identified as being related to the performance of volunteers including the selection process, help from the family, living in a highly endemic area, age at the beginning of volunteer work, duration of volunteer service, and being a folk-healer.

In rural Thailand, it is common for folk healers to be involved in community health problems either by providing treatment with herbal medicine or other forms of health care. It is also not uncommon for these folk healers to illegally provide treatment with modern medicine or even parenteral drugs. These healers normally charge villagers a reasonable price. Many villagers depend on these healers' services, particularly in areas that are far from a health center or a hospital (Cunningham 1970; Weisberg 1982). Besides being health care-providers, they usually enjoy a relatively high social status in their communities. Subsequently, in the recruitment of the health or malaria volunteers in a village, folk healers are often selected because both the villagers and the malaria officers consider that they are appropriate people to be health or malaria volunteers (Okanurak 1986).

Although folk-healers provide a general service to the population, the recruitment of folk healers as volunteers could, in some circumstances, be harmful to the health care system. In malaria case detection, volunteers are involved in the preparation of blood slides and the provision of presumptive treatment. Their training, provided by the Malaria Division, enables them to be represented within the community as being equivalent in skill to a general practitioner. This may enable them to gain more income, by giving treatment for other conditions which is beyond their competence. On the other hand, if they understand their role and responsibility, and work within the scope of their training, their recruitment into the primary health care system could be beneficial (Okanurak and Sornmani 1989).

It is the intention of this study to elucidate this problem by studying the role and boundaries of the practice of folk healers who have been recruited as malaria volunteers. The study was conducted in three districts of Chiangmai Province, namely Fang, Mae-ai and Chieng Dao Districts, and investigated the role and performance of folk healer volunteers in comparison to those who are not folk healers. The investigation also covered the perceptions of villagers toward the two types of volunteers.

CHAPTER 2

STRUCTURE OF THE MALARIA VOLUNTEER PROGRAM
AND
ROLE OF FOLK HEALERS IN THAILAND

2.1 Structure of the Malaria Volunteer Program

In 1961 the Thai Malaria Division, Department of Communicable Disease Control of the Ministry of Public Health, adopted the Village Malaria Collaborator Program as one approach in dealing with the malaria problem. The rationale for the volunteer program was derived from the concept that the Malaria Division could not provide adequate and efficient services to all people in malaria endemic areas, particularly diagnostic and curative services. In addition, communities often failed to cooperate with official malaria control activities. Village volunteers were seen as a way to increase community involvement in control, to improve communications between malaria workers, and villagers, and to help to solve the problem of inadequate manpower (Malaria Division 1980).

Working under these assumptions, the Malaria Division recruited local people in malaria endemic areas who were willing to serve the community on a voluntary basis (Malaria Division 1980). In line with the program's underlying principles, the Malaria Division provided initial one-day or two-day training courses for these volunteers, and subsequent supervision. Refresher courses were provided after the volunteers had been working for sometime. The volunteers were expected to take blood slides from the villagers whom they suspected of having malaria, administer presumptive treatment to suspected cases, and keep records. They also had to give health education to the community and serve as links between health authorities and the communities with the objective of increasing community knowledge about how to prevent malaria and where to get treatment (Malaria Division 1980).

2.2 Selection Process

Four procedures have been used to select volunteers. Firstly, at the beginning of the program (in 1961) selection was made from an established group in the community, such as a youth group. Secondly, when the program expanded into villages which had no established groups, selection depended on the justification of a malaria officer who was working in that community as well as the recommendation of the village headman. Thirdly, the program employed the sociogram method which apparently was not successful because the malaria officers were not familiar with, nor trained, in using sociograms. The current method involves inviting community leaders, such as the village headman, members of the village committee and the abbot, to attend a meeting. At the meeting it is decided who would be an appropriate volunteer. That person is then asked whether he or she would be willing to serve as a volunteer (Chitprarop 1982). The guidelines for selection are quite broad and folk-healers might often be selected because both the villagers and the malaria officer think the healers should know more about health and medicine than other villagers.

2.3 Training Process

According to the program guidelines, volunteers are trained for one or two days before they begin to work in malaria control. The trainer is the chief of the Malaria Sector Office under the supervision and coordination of the Malaria Zone Office. The training course covers at least six subjects. The first subject includes general information about malaria, such as malaria mortality and morbidity rates, causes of transmission, signs and symptoms, and preventive methods. The second deals with methods of control including: DDT spraying, case detection and biological control. The third subject concerns how to prepare thick blood slides. The last three subjects are drug distribution, report writing and methods of motivating the community and obtaining cooperation (Malaria Division 1980; 1982). All new volunteers are supposed to attend this training course and no additional training is provided for the folk healer-volunteers.

2.4 Supervision System

The Malaria Division decreed that the blood slides prepared by volunteers be collected at least four times a month (Malaria Division 1982). In collecting the blood slides, the malaria officer was also supposed to check on the activities of volunteers and provide advice.

2.5 Reward System

Volunteers receive some remuneration (per diem) from the Malaria Division only when they attend a training or a refresher course. They do not receive any monetary compensation for their volunteer services. However, free medical care is available to volunteers at government hospitals or health centers. In addition, a Malaria Division certificate is awarded to all volunteers who have regularly taken blood slides every month for at least a year. A second certificate, offered by the Ministry of Public Health, is awarded to volunteers who take slides regularly every month for two subsequent years. The final and highest reward is a pin, which is awarded to volunteers who have taken blood slides continuously for at least three years after receiving the certificate from the Ministry of Public Health i.e. after taking slides for six consecutive years (Malaria Division 1980).

2.6 Role of Folk Healers in Thailand

Beliefs in traditional healers, who use remedies such as herbal medicine and sometimes even witchcraft, are still strong in rural Thailand. Some folk healers have adapted their practices to incorporate modern medicines, as illustrated by "injectionists" who inject modern drugs in the acute phase of an illness, and follow up using either herbal or modern medicine. Their practices are illegal and can sometimes be harmful to patients. At district hospitals, it is not uncommon to see patients suffering with drug toxicity or malunion of extremity bones after being treated by folk healers. On the other hand, they provide treatment to patients in remote villages at nominal cost and understand the health problems of the villagers that they serve.

The study of "Maw Klang Ban" (village doctors) or folk healers in Thailand has been a subject of interest to researchers in and outside Thailand. Some studies were documented in Thai (Aattasit *et al.* 1986; Bhavabhutanonda 1980; Ministry of Education 1979; Muangman, Sopavanich, and Fongsin 1977; Muangman, Suwan, and Ratana 1980; Muangman, Fagfhaipuog, and Trakulwongse 1977; Rauyajin and Kaewthep 1980; Sermsri and Riley 1974; Vajcharadulaya, Vajchirapornthip and Vajcharachaisurapol 1984) and others in English (Cunningham 1970; Cunningham and Marlowe 1967; Irvine 1979; Golomb 1984, 1985, 1986; Mahidol University 1974; Mulholland 1979; Sermsri 1989). Most have described the characteristics of the healers, the ways they practice, and their medicines, particularly herbal medicines. Very few have studied the role of folk healers in the official primary health care programme.

Based on the studies of Cunningham (1970), Vajcharadulaya *et al.* (1984) and Sornmani and Okanurak (1991), folk healers in Thailand can be loosely classified into five groups according to their methods of treatment:

1. Traditional healers
2. Injectionists
3. Magic doctors
4. Monk doctors
5. Chinese doctors

Little is known about the numbers of folk healers in Thailand and their distribution into the various categories. A recent nationwide survey of people treating orthopedic and arthritis cases found that there were between two and three folk healers engaged in this practice in each district of Thailand; suggesting that there could be twice as many folk healers as qualified medical practitioners in the country (Vajcharadulaya, Vajchirapornthip and Vajcharachaisurapol, 1984). Among the 5,926 folk healers they identified, 222 (3,7%) were monk doctors. In a study of general village health volunteers in four regions, out of 8,4%-29,2% had experience in healing. Among these, between 56,5% and 70,8% were traditional healers, and out of 25,9%-43,0% were injectionists (Hongvivatana *et al.*, 1988).

2.6.1 Traditional Healers (Maw Pan Boran or Ancient Folk Healer) practice mainly with herbal medicines, massage and other ancient methods. They collect their herbs from the jungle or mountains, or buy them from specialist stores. One study (Aattasit *et al.* 1986) found they were mainly male villagers with an average age of 50-60 years. They were indigenous people whose main occupation was in agriculture and they usually were relatively affluent. More than half of them had ancestors who were traditional healers. Knowledge of healing was obtained from these ancestors, from older traditional healers, and from reading old manuscripts.

In 1967, Thailand passed a law accepting traditional healers as legal practitioners who could treat patients with herbal medicine. Their practice is based on the belief that diseases are caused by an imbalance of nature, particularly an imbalance of the four important elements: soil, water, air and fire. Treatment is aimed at correcting and adjusting the equilibrium of the four elements. The medicines, mainly of herbal origin, are boiled or stewed for sometime before being

consumed by patients. The course of treatment is usually long and the response to the drugs is slow. Additional treatment might involve the application of holy water, chanting holy words, massage and the application of herbal ointments. The average cost of treatment in 1986 was about 50 Baht (2 US\$), although some healers took only a few Baht.

2.6.2 Injectionists (Maw Cheed-ya). Folk healers of this kind, who practice medicine mainly by using injections, are the most common in rural Thailand. Their practice is illegal under Thai law but is popular in most rural communities. Since there is virtually a free market for drugs in Thailand, antibiotics and other parenterals can be easily acquired from the chemist shops. People believe this means of treatment is effective, quick, convenient, cheap, and sometimes can be paid off in installments over time (Sornmani and Okanurak, personal observation). Injectionists receive their training by being recruited as orderlies in the army or by working as auxiliary health personnel in hospitals, clinics, and malaria units. Others may obtain knowledge from other injectionists who are often relatives. Being illegal, details of the incomes of injectionists are difficult to find. In one village, the number of visits to households made by injectionists exceeded those from government health officers (Cunningham 1970). The villagers who used injection doctors spent about seven to eight times more per treatment than the cost of a visit to the local health station.

Injectionists travelled from one village to another by bicycle in the past, but now the use of a motorcycle or motorvehicle is more common. They have their own territories, usually villages close to their home base. Some open small clinics in the villages and some also have a place to admit patients. Although it is against the law, punishment is rather rare, perhaps because the reluctance of local health authorities or villagers to act against injectionists often results in unsuccessful judicial process because of a lack of evidence. This reluctance to testify is related to a common belief among physicians and health authorities in rural areas that injectionists are more beneficial than harmful. They are seen as a means of communication with villagers and a help with programmes which require long term compliance, such as tuberculosis chemotherapy (Cunningham 1970).

2.6.3 Magic Doctors (Maw Saiyasard) use sorcery in their practices, and are popular among people who believe that disease is caused by spirits or magic powers. Treatment comprises a ritual ceremony to chase the intrusion out of the victim, which can consist of beating with holy sticks, bathing with holy water, and blowing air on the patient accompanied by magic words. In the past it was not uncommon to hear that a girl had developed pneumonia as a complication of malaria because she had been soaked with holy water by the magic doctor. Although magic doctors are no longer widely used for curative purposes, some are still used for preventive purpose. A recent example is the belief that a female spirit who is fond of strong men is responsible for Sudden Unexpected Nocturnal Death among healthy male laborers in northeast Thailand. This spirit is believed to take away male souls while they are sleeping. The remedy is to invite a magic doctor to perform a ritual ceremony in the village. These doctors also suggest that male villagers can fool the spirit by painting their faces with powder and dressing in a woman's night gown whenever they go to bed.

2.6.4 Monk Doctors (Maw Pra) are Buddhist monks who practice curative medicine to help mankind. Methods of treatment include the use of herbal medicine, holy water and meditation. Some monk doctors are particularly popular for the treatment of orthopaedic cases such as broken arms or legs, and they use splints to immobilize the bone. They also apply herbs, oil, and holy water externally, while some are also known to use the occult (Golomb 1984, 1986). Monk doctors are often considered as the last resort for desperate cases such as those in later stages of cancer. In this case, treatment is in the form of herbal medicine and meditation. This practice can be very lucrative. Some have been known to collect donations worth several million Baht to build temples and living quarters within a few years of their establishment as doctors.

2.6.5 Chinese Doctors (Maw Cheen) are popular among Thais of Chinese origin for the prevention and promotion aspect of health. Most use herbs, and recently acupuncture has also been well accepted in Thailand.

In contrast to other folk healers, Chinese doctors are generally found in urban areas. They usually have obtained their knowledge from a more senior practitioner.

CHAPTER 3

RESEARCH DESIGN AND METHODOLOGY

3.1 Research Methodology

The research spanned a period of one and a half years and consisted of four phases.

Phase I : Preliminary Phase (October-November 1988)

The purpose was to identify a research site and to gather information about malaria volunteers, particularly folk healer volunteers. Base-line data was collected on such variables as the number of malaria volunteers, the proportion who were folk healers, their work loads, malaria endemicity, and control operations.

Phase II : Observation Phase (December 1988-July 1989)

The purpose of this phase was to collect information which could be used to design the questionnaires used in the major part of the study. Detailed information was collected from a small sample of volunteers who were folk healers and those who were not, covering the volunteers' personal characteristics, their attitudes toward the program, and some preliminary qualitative data on factors which may influence folk healer-volunteers to perform differently to non-folk healer-volunteers. In addition, information on villagers' attitudes toward both types of volunteers and to the overall volunteer program was collected. To achieve these purposes, participant and non-participant observation and informal interviews were employed. A total of 24 volunteers were interviewed and observed at this stage, 6 from each of the following four categories :

- Folk healer-volunteers who were active;
- Folk healer-volunteers who were inactive;
- Non-folk healer-volunteers who were very active;
- Non-folk healer-volunteers who were very inactive.

Volunteers were identified as folk healers or non-folk healers by malaria officers. A median of 27 blood smears per year were prepared by the 246 volunteers in this Malaria sector, with a range from 0-29 per year. Volunteers were categorized into three groups by considering median and quartile deviations. Those who had produced less than 17 slides per year were considered to be inactive. Those who had prepared more than 38 slides per year were very active. Sample selection in this phase also took socio-economic status into consideration with a view to including the widest possible range of characteristics. As a result, each group contained both males and females, rich and poor, and educated and uneducated volunteers.

Each of 24 volunteers received a weekly visit for six months. During these visits, observations and discussions with other villagers were also carried out. At the end of this phase, two sets of questionnaires were developed, one set for

volunteers, another for villagers. Questionnaires were pretested with 25 volunteers and 25 villagers in another district of Chiangmai Province and subsequently revised.

Phase III : Structured Interview Phase (August-September 1989)

The aim of this phase was to gather data from a larger representative sample of volunteers and villagers using the questionnaires developed in the Observation Phase. A total of 246 volunteers were studied, among whom 113 were folk healers. Interviews were also conducted with 135 villagers who were not volunteers.

Phase IV : Data Analysis and Report Writing (November 1989-March 1990)

Qualitative information was analyzed by hand. All quantitative data from the field was coded and transferred onto magnetic tape and prepared for computer analysis.

3.2 Research Area

The study was conducted in three districts of Fang, Mae-ai, and Chiang Dao of Chiangmai Province, Northern Thailand (Figure 1). The area, about 900 km north of Bangkok, is part of the high plateau of the North and surrounded by national reserve forest and mountains. All districts can be reached by paved road and they are about 120 km northeast of Chiangmai City. The average annual temperature is about 25 degrees Celsius and can fall to 10 degrees Celsius in winter. The majority of the population are northern Thai who speak the northern Thai dialect, although some hill tribe people, such as Karen, Maeo and Hmong, also live there. In general, a district comprises ten tambons or subdistricts with a population of 8,000-10,000 persons. About 8-10 villages are grouped into a Tambon. The boundary of a village varies from 5-10 sq.km and there are about 50-100 households or 250-500 persons per village living in a cluster at the center of the village. The main occupations of this area are fruit orchards, rice farming and jungle vendors.

All three districts are in the Malaria Control Phase, under the responsibility of the Malaria Sector 7 of Zone 1 in Region 2. One malaria clinic operates at Fang District Center. Because the area is quite large, control program activities have varied from one place to another. About 153 villages and part of 40 villages, or 193,786 people were not subject to house spraying with DDT, 16 villages and part of 37 villages had their dwellings sprayed once a year, while the rest, seven villages and part of six villages, were subject to two-rounds of DDT spraying a year (Table 2).

The incidence of malaria in the study area appears in Table 3. It can be seen that in 1987 and 1988, blood examinations were undertaken for 68,159 and 80,373 persons respectively. The annual parasite incidence varied from 1.3 to 9.7 per 1000 population. *Plasmodium falciparum* was the predominant species of parasite followed by *P. vivax*.

Research Area

Figure 1. Map of Thailand, showing the research area in Chiangmai Province



Table 2 DDT spraying activity in the study area in 1988

Dis- trict	Village	Popu- lation	DDT Spraying					
			None		One round		Two rounds	
			Village	Pop.	Village	Pop.	Village	Pop
Fang	103	122,978	81+(15)	111,157	3+(12)	5,340	4+(3)	6,481
Maeai	54	55,677	33+16	42,271	3+(15)	8,921	2+(2)	4,485
Chieng Dao	60	59,500	39+(9)	40,358	10+(10)	17,620	1+(1)	1,522
Total	217	238,155	153+(40)	193,786	16+(37)	31,881	7+(6)	12,488

Note: () = part of the village

Table 3 Malaria cases in the study area in 1987 and 1988

District	1988			1987		
	No. of blood exam	No. of +ve cases	API	No. of blood exam	No. of blood cases	API
Fang	2 25,215	655	5.3	37,567	645	5.4
Maeai	15,652	179	3.2	17,047	74	1.3
Chieng Dao	27,292	406	6.8	25,759	459	9.7
Total	68,159	1,240		80,373	1,178	

CHAPTER 4

FOLK HEALERS IN THE MALARIA VOLUNTEER PROGRAM

4.1 Role of Malaria Volunteers

If you found yourself in a Thai village and looked around, you would perhaps observe on the front of some houses a green sign-board with the medical symbol of Hippocrates. On the sign-board, one would read (in Thai) "Malaria Volunteer Office, Malaria Division, Department of Communicable Diseases Control, Ministry of Public Health" (Figure 2). This sign-board indicates the residence of a malaria volunteer. Somewhere else in the village you might see a striking poster with a picture of an ill-looking man. The poster says something like "if you have a fever and headache or you suspect you might have malaria, you can get a free blood examination from the offices on the list" (Figure 3). This list includes the volunteer office in the village and malaria clinics in town.

The main objective of malaria volunteer work is passive case detection. Volunteers are expected to take blood smears from the villagers at their offices or houses. After the blood smears, one dose of presumptive treatment (for an adult : one tablet each of sulfadoxine and pyrimethamine, and 30 mg of primaquine) are given to the patients. In principle, blood smears are collected weekly and examined for malarial parasites by the malaria officer at the Malaria Clinic. If the smear is positive, the malaria workers, with the assistance of volunteers, will give radical treatment to the patient.

As described earlier, malaria volunteers in the study were recruited either on the basis of community opinion or on the advice of malaria officers. They received two days' training, where they were educated about malaria transmission and prevention, the practice of taking blood smears and sterile techniques. A simple report form has been introduced and volunteers have been trained to fill out the report. After training, each volunteer was provided with a plastic box containing slides, a needle for pricking fingers, cotton wool, alcohol as the sterilizing agent and drugs for presumptive treatment. They also received a handout with instructions on presumptive treatment, and report forms for passive case detection. The form requests information on the patient's name, address, age, gender and what kind and amount of anti-malaria drugs have been given. The result of the blood examination is entered on this report, which is supposed to be completed after the blood slide has been examined. The last column is for remarks concerning the place where the person was before having fever or coming for blood examination.

Figure 2. Malaria volunteer office indicated by the sign.



Figure 3. Malaria posters describe malaria symptoms and places for free blood examination.



4.2 Socio-Economic Characteristic of Malaria Volunteers

Gender

There were 246 volunteers in this study. The volunteers were overwhelmingly male (93%) (Table 4). This can be explained firstly by the fact that the volunteer program requires volunteers to be literate so that they can prepare reports. In these communities there are many more men than women who can read and write. In addition, in rural communities it is customary that men maintain the contact with authorities.

Education

In the past, the education system required that every person in Thailand had completed four years of compulsory education. Recently, the government has expanded this requirement to six years. The educational level of the volunteers, then, was categorized as being incomplete, complete compulsory education, or higher than the compulsory education. The data obtained indicated that most of the volunteers (95%) had completed compulsory education or higher (Table 4).

Age

Experience in many countries shows that young community health workers perform less satisfactorily than their older counterparts, since the young have less standing in the community and less commitment to the community (Ofosu-Amaah 1983; WHO 1984). However, a recent study in Thailand showed that standing in the community, commitment to, or respect from the community did not depend only on age. Supplemental factors, such as marital status were also important (Okanurak 1986). The present study observed that 88 percent of the volunteers were 30 years or older and 94 percent were married (Table 4).

Occupation

More than half of the volunteers were involved in agricultural-based occupations, such as rice cultivation and fruit orchards. Another 13 percent worked as small traders, such as operating the grocery store in their respective villages. Most volunteers could be considered economically comfortable as indicated by their housing conditions and the possession of material items and property.

Among the volunteers, 20 persons or 8 percent gave folk healing practice as their main occupation. However, another 93 volunteers or 38 percent claimed that they practiced folk healing in addition to other occupations, making a total of 113 folk-healer malaria-volunteers or 46 percent of the total volunteers studied.

Table 4 Socio-economic characteristics of volunteers.

<u>Gender</u>	%
Male	93
Female	7
Total	100 (N=246)
 <u>Compulsory education</u>	
Incomplete	5
Complete	85
Higher	10
Total	100 (N=246)
 <u>Age (years)</u>	
16-30	12
31-40	28
41-50	28
50+	32
Total	100 (N=246)
 <u>Marital status</u>	
Single	2
Married	94
Widow, divorced	4
Total	100 (N=246)
 <u>Main occupation</u>	
Farmer	67
Merchant	13
Employed	10
Folk healer	8
Other	2
Total	100 (N=246)

Figure 4. A volunteer



4.3 Comparison of Socio-Economic Characteristics of Non-Folk Healer-Volunteers and Folk Healer-Volunteers

In general, the socio-economic characteristics of the non-folk healer-volunteers and folk healer-volunteers were similar. From observations and comparisons within the villages, the majority of volunteers were economically comfortable and had completed their compulsory education. However, folk healer-volunteers were relatively older than non-folk healers. About 75 percent of folk healer-volunteers were above 40 years old and 50 percent of them were above 50 years of age (Table 5). This may be because it takes a relatively long period of time for someone to be recognized as a folk healer in a community.

Gender is significantly related to being a folk healer. Among malaria volunteers and in general in Thailand, more men are folk healers than women (Table 5). Women folk healers are usually traditional birth attendants.

Another outstanding difference was the period of volunteer service. About 51 percent of folk healer-volunteers had been in the service for more than 9 years, compared to only 19 percent of the non-folk healer-volunteers (Table 5). These figures are consistent with two hypotheses. Firstly, folk healers may stay longer in the programme. Alternatively, the programme may have recruited folk healers earlier than non-folk healers. Statistical data on the proportion of folk healers recruited at different times are not available. However, the Malaria Division claims that its policy during the early years of the Malaria Volunteer Program was not to recruit folk healers, because it did not want to be responsible for any increase in the illegal practice of folk healers who were recruited (Chitprarop, personal communication). Further support is found from an earlier study of voluntary collaborators in the antimalarial program of northern Thailand, which reported that only 23.5% of the 5538 volunteers were folk healers (Chitprarop 1982). This compares with 46% in the present study.

Accordingly, the fact that the folk healers in this study had been in volunteer service for more years than non-folk healers can be interpreted as implying that folk healers stayed longer with the programme.

Table 5 Comparison of socio-economic characteristics of volunteers

	Volunteers	
	Non-Folk (N=133) %	Folk Healer (N=113) %
<u>Age</u>		
16-30	21	3
31-40	32	22
41-50	30	25
50+	17	50
Total	100	100

Chi-square = 41.1962; df = 3; p = 0.0000

Gender

Male	89	98
Female	11	2
Total	100	100

Chi-square = 7.1714; df = 1; p = 0.0074

No. of years being a volunteer

0-3	34	15
4-6	30	20
7-9	17	14
9+	19	51
Total	100	100

Chi-square = 30.8103; df = 3; p = 0.0000

4.4 Attitudes toward Volunteer Work

Attitudes toward volunteer work varied considerably. For example, most volunteers in both categories felt that it was still necessary to have a volunteer living in the community to take smears and give presumptive treatment (Table 6). A minority of volunteers felt that volunteer work had wasted their time or had harmed their occupations (Table 6).

Most of the volunteers in both groups felt that they gained some social respect after becoming volunteers. However, folk healer-volunteers believed that the community gave them respect more than non-folk healer-volunteers did (Table 6). This may be because non-folk healer-volunteers were less concerned with community response to their being volunteers. It might be an important issue for healers, however, since a healer with social respect and a good social reputation may gain more clients.

This study compared the opinion of both groups of volunteers on the issue of continuity of volunteer workers. Folk healer-volunteers were significantly less likely than non-folk healer-volunteers to have considered dropping out (Table 6). A significant relationship also existed between volunteers' opinions about rotating the responsibility of being folk healers. About 68 percent of non-folk healer-volunteers believed that the volunteer position should be held on a rotating basis. Their reason was that if people took turns with volunteer work, the community would have more people who knew something about malaria, and this was preferable to having only one person who knew about malaria. The idea of rotation was significantly less acceptable among the folk healer-volunteers with only 31 percent supporting the idea. The reason given was that it was better to have a particular person responsible for the community health problem.

Folk healer-volunteers, therefore, did not generally want other persons to take the volunteer position from them, which helps to explain their higher tendency to stay in the programme.

The study also found significant differences in volunteers' attitudes about who should be volunteers. About 77 percent of folk healer-volunteers believed that folk healers would be best as volunteers, and less than 10 percent of them thought that an ordinary villager should be a volunteer. In contrast, more than 30 percent of non-folk healer-volunteers believed that a villager should take a volunteer position (Table 6). Anyway, more than half of them still preferred folk healers as volunteers on the grounds that healers already had healing knowledge. They were also willing to see patients at home, giving them more opportunities to take blood smears from suspected cases. The reason given by those who believed a normal villager could be a volunteer was that the job was not difficult, and any villager could do it after training. They also worried that folk healers might take advantage of being a volunteer to increase their healing practices.

Table 6 Attitudes toward volunteer work

	Volunteers	
	Non-Folk (N=133) %	Folk Healer (N=113) %
<u>Necessity of a volunteer</u>		
No	6	4
Yes	94	96
Total	100	100
<u>Affect occupation?</u>		
No	73	81
Yes	27	19
Total	100	100
<u>Wasting Time</u>		
No	85	80
Yes	15	20
Total	100	100
<u>Increase social respect</u>		
Yes	83	93
No	17	7
Total	100	100

Chi-square = 4.8964, df = 1; p = 0.0269

Thought of dropping out

No	40	57
Yes	60	43
Total	100	100

Chi-square = 6.24; df = 1; p = 0.0125

Rotation

No	31	45
Yes	68	55
Total	100	100

Chi-square 4.2142; df = 1; p = 0.0401

Who should be a better volunteer

Folk	53	77
Anyone	16	14
Villager	31	9
Total	100	100

Chi-square = 20.1383; df = 2; p = 0.0000

4.5 Performance of the Volunteers

The major tasks of volunteers are to detect cases by taking blood smears from suspected cases in the village, and to give presumptive treatment. Additional jobs are to assist in recording malaria cases and to provide malaria education to the villagers.

In terms of case detection, the number, the regularity in preparing blood smears for malaria officers to collect weekly for diagnosis, and the number of positive cases detected can be used to assess the performance of volunteers. In addition, the Malaria Division awards a certificate to volunteers after they have regularly carried out a certain amount of work. Therefore, certification also reflects an aspect of performance.

To assess the performance of volunteers from the number of blood smears, the past three years records were analyzed. Using an interindividual comparison by considering median and quartile deviation of slides per year, volunteers were graded into inactive, active and very active. The relationship of being folk healers and being an active volunteer was statistically significant. It was found that 27% of non-folk healer-volunteers were in the inactive group (produced less than 17 slides/year) whereas only 12% of the folk healer-volunteers were in this group (Table 7).

The study further observed that folk healer-volunteers prepared blood smears for the malaria officers to collect more regularly than the non-folk healer-volunteers. It was found that 46 percent of folk healer-volunteers always had blood smears for malaria officials to collect every month, while only 33 percent of the non-folk healer-volunteers had done so (Table 7). This might be because folk healers take blood smears from suspected malaria cases, as well as from other patients, when they pay a home visit. Non-folk healer-volunteers, on the other hand, take blood smears only from people who come to their houses.

It is possible that the endemicity of malaria might also play an important role in determining differences in the number and regularity of slides taken. However, in this study there was no statistically significant difference in the distribution of folk healers and non-folk healer-volunteers by different malaria endemicity areas (Table 7). Hence, it can be concluded that being a folk healer was a significant predictor of the better performance of volunteers.

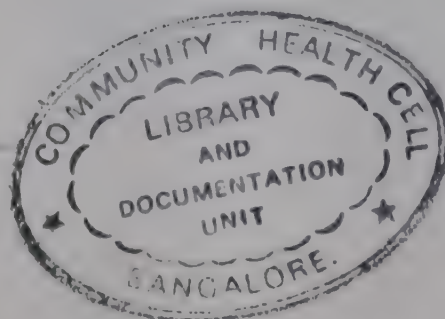
The number of positive cases detected was also significantly related to being folk healers. Almost all folk healer-volunteers (95%) claimed that malaria cases had been diagnosed from their slide preparation, but only 53 percent of non-folk healer-volunteers said so. Being a folk healer was also significantly related to receiving a malaria certificate, and more folk healer-volunteers (50%) had obtained certificates than non-folk healer-volunteers (27%) (Table 7).

To summarize from these four indicators - number of blood smears, regularity in preparing blood smears, number of positive cases detected, and obtaining a certificate - it can be concluded that folk healer-volunteers performed better in malaria case detection than non-folk healer-volunteers.

Having a place in the community to take blood smears is an important component of the malaria surveillance system. Villagers who felt ill can go to the volunteer

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whenever they wanted. Usually, there were three different periods of time that were convenient for both villagers and volunteers, early in the morning, lunch time, and late evening or night. If the volunteers were grocery owners, they always worked in their shops and the patients could visit them anytime of the day. However, there were some complaints from this group of volunteers that the visit of suspected cases during those three periods interfered with their business, as these periods are the peak times when customers come to buy things at the stores. Some said that they were willing to help the community only if the patients called on them outside peak periods. In contrast, the folk healer-volunteers enjoyed and welcomed the visit of the patients any time. Sometimes, they would go around the village looking for sick people or would visit patients if they had heard about their illness.

In addition, the folk healer-volunteers often extended their services by personally delivering slides to malaria clinics for diagnosis rather than waiting for them to be collected by malaria officers. A significant relationship between delivery of slides to the malaria clinic and being a folk healer is shown in Table 8. About half of the folk healer-volunteers said that they had at some stage delivered slides to the malaria clinic, while only about 25 percent of non-folk healer-volunteers made this claim (Table 7). The most common reason given from those who had delivered blood slides themselves was that they suspected that particular patients might have had malaria. By bringing the blood slide to the clinic, they would know the diagnosis early and treatment could be given immediately.

The main objective of volunteer work is passive case detection, therefore, volunteers are not expected to go around and look for cases. Nevertheless, if the patients are too weak to come to the volunteers' houses, some volunteers make home visits. In this study, it was observed that making home visits was significantly related to being a folk healer. Almost all folk healer-volunteers (96%) had taken blood smears at the villagers' home, whereas about 71 percent of non-folk healer-volunteers had done so.

From this evidence, it can be concluded that the performance of folk healer-volunteers in passive case detection is superior to the non-folk healer group. However, when the activity for health education was taken into account, both groups behaved similarly. For example, no advice on the use of mosquito nets or repellent for prevention of mosquito bites was noted during the study period, nor was any effort put into the community to encourage acceptance of DDT spraying during the whole period of investigation. The only educational measure seen in the villages was the placement of anti-malarial posters on the walls of the volunteers' houses.

Table 7 Comparison of the performance of the volunteers

	Volunteers	
	Non-Folk (N=131) %	Folk Healer (N=113) %
<u>No. of Slides*</u>		
Inactive (0-16)	27	12
Active (17-38)	47	46
Very active (38+)	26	42
Total	100	100

Chi-square = 12.6962; df = 2; p = 0.0018

Always have slides for collection every month**

No	67	54
Yes	33	46
Total	100	100

Chi-square = 4.325; df = 1; p = 0.0374

Endemicity of malaria***

Non-sprayed	79	86
Sprayed	21	14
Total	100	100

Chi-square = 1.6762; df = 1; N.S.

Found malaria case

No	47	15
Yes	53	85
Total	100	100

Chi-square = 26.5362; df = 1; p = 0.0000

Ever received a certificate

No	73	50
Yes	27	50
Total	100	100

Chi-square = 12.5980; df = 1; p = 0.0004

* No. of slides = total number of slides prepared by volunteers in a year.

** Always have slides for collection every month refers to the regularity in preparing blood smears.

*** In this study, DDT spraying activity was used as the criterion for endemicity, that is, sprayed and non-sprayed areas refer to high and low endemicity, respectively.

Table 8 Other activities performed by malaria volunteers

	Volunteers	
	Non-Folk (N=131) %	Folk Healer (N=113) %
<u>Home visits</u>		
No	29	4
Yes	71	96
Total	100	100

Chi-square = 23.0458, df = 1; p = 0.0000

Reason for making home visits

Villager was too sick	62	46
Visit the patient	2	42
Willing to provide service at home	32	9
Other	4	3
Total	100	100

Chi-square = 50.4964; df = 1; p = 0.0000

Deliver slides

No	75	49
Yes	25	51
Total	100	100

Chi-square = 16.3548, df = 1; p = 0.0001

Reason for delivering slides (both groups)
%

Having other business	33.0
Having a suspected case	44.0
Other	23.0
Total	100.0 (N=85)

4.6 Folk Healer Performance

In this study, about 75 percent of folk healer-volunteers were over 40 years old (Table 5). These volunteers had gained their knowledge and experience in healing through several sources, the most common being health officers and older folk healers whom they respected as teachers. Most of the folk healer-volunteers (93%) believed that being a malaria volunteer supported their healing practice, by increasing community respect and subsequently increasing the number of patients (Table 9). Very commonly, they would go around the village visiting patients with any illness. They might take blood smears from these cases as well as those who complained about headache and malaise. After taking blood smears, 78% of folk healer-volunteers admitted that they had treated these patients for the signs and symptoms of other illnesses. In addition, 47% of them said they treated suspected malaria cases with their own anti-malarial drugs other than the medicine provided by malaria officers (Table 9). In such cases, more sophisticated drugs such as quinine injections and tetracycline were used, and patients were charged a fee. Patients were not charged for presumptive treatment using drugs supplied by malaria officers.

Injections were commonly administered and 96% of folk healers gave injections. It was not unusual to find that the injections consisted of such solutions as penicillin, streptomycin and infused saline or glucose. Toxic reactions or side effects to the drugs were admitted by 24% of folk healer-volunteers (Table 9). If this problem occurred, patients would be referred to the hospital in the nearby town. This information was confirmed by a doctor in charge of the district hospital who claimed that about one case per month of drug hypersensitivity or severe side effects, resulting from the malpractice of folk healers, was admitted to his hospital. Informants also claimed that after the news of the patients suffering side effects spread, the responsible healer might not be able to practice in that community again but had to move to other communities where villagers did not know these details. In general, both the villagers and the authorities did not consider drug toxicity a serious problem.

However, if a patient died, the healer generally had to pay some compensation to the patient's family. Although sometimes this did not occur because the Thai believe in Karma. That belief implies that a patient who dies has run out of merit to be alive and those who are disabled suffer because of old Karma from previous deeds of a former life. Therefore, some villagers will not sue the healers.

Table 9 Perceptions and performance of folk healer-volunteers

	%
<u>Being a volunteer supports healing practice</u>	
No	7
Yes	93
Total	100 (N=113)
<u>Help increasing no. of patients</u>	
No	8
Same	19
Yes	73
Total	100 (N=109)
<u>Ever taking the opportunity to treat those who came for blood smear</u>	
No	22
Yes	78
Total	100 (N=114)
<u>Treated malaria case with your own medicine</u>	
No	53
Yes	47
Total	100 (N=95)
<u>Patients ever had side effect from their treatment</u>	
No	76
Yes	24
Total	100 (N=115)

Figure 5. A folk healer-volunteer



Figure 6. Medicine normally used by the folk healers.



Figure 7. Preparing the injection for a patient.



CHAPTER 5

VOLUNTARY PERFORMANCE : CASE STUDIES

In the previous chapters, summary information of all the malaria volunteers in the Malaria Sector 7, Zone 1, Chiangmai Province has been presented, showing that folk healers participated in the malaria surveillance program more actively than non-folk healer-volunteers. The main reason for this was that they gained more social status leading to an increase in their income. In some cases, they knew their roles and abilities and stayed within this framework, but others took advantage of their volunteer status to gain more income through the misuse of drugs and injections. In doing so, sometimes they may have endangered human health.

To better understand the interacting factors between being malaria volunteers and folk healers, five study cases are now described. The names used in each are pseudonyms.

Case I : Mr Porn

Porn is indigenous to his village, aged 53 years old and living with his wife. He has a pleasant personality and runs a small barber shop in the village. His economic position is stable since all of his children are grown up and have good jobs in other provinces. They regularly send money to him and request him to retire from his work.

Porn became a folk healer through self-learning from books and journals, as well as by trial and error. He learned about injections when he was ordained to the monkhood. However, he knows his limitations in healing practice, and will recommend that a patient go to the hospital instead of giving treatment if he considers the case beyond his ability.

Porn is well known and respected by his neighbors and was selected to be a malaria volunteer by his community. He has served his community for over ten years. He has done his volunteer work so well that he was awarded a certificate and recognized as an excellent volunteer for his area. He has always taken blood smears every month, although he lives in an area of very low endemicity. Porn is willing to take blood smears at the patients' homes and never charges for this.

He accepts that volunteer work has supported his healing practice in the community. Although volunteer work itself does not provide him with any income, his devotion and attention to suspected malaria cases have encouraged those with other diseases to come to him. Porn is considered by his fellow villagers to be a good healer, not from his ability to use medicine, but from his generosity and warm understanding of his patients.

Porn is an example of an ideal folk healer volunteer in the malaria surveillance system. It may be difficult to find such a volunteer who is mature, has a stable family and understands his limitations. His willingness to assist the community and his friendly personal style are also important characteristics associated with his success.

Case II : Mr Sri

Sri, age 53, is considered by his fellow villagers as an entrepreneur and energetic man. He has a stable family and his income is above average. His children are all grown up and independent. But he is interested in increasing his wealth, and he has several businesses, including selling land and antiques, and serving as an agent to recruit laborers for Middle East work. Nevertheless, he considers his main occupation as rice cultivation. He is also a folk healer. He has inherited the knowledge of diseases and treatment from his father and from some local journals and books.

Sri was recruited as a malaria volunteer by malaria officers, but does not pay much attention to his work. He feels irritated if a few villagers come for blood smears at the same time. Nevertheless, he prefers to stay on as a volunteer because this increases his social recognition from the villagers as a semi-official person.

Sri is recognized as a folk healer who uses strong medicine and charges an expensive rate. In this case, Sri takes advantage of being a malaria volunteer to promote his own business while not paying much attention to his duty of case detection. He will take a blood smear but then prescribe treatment with his own medicine and charge expensively. He admits that some patients have suffered side effects due to his treatment. Sri has been a volunteer for more than ten years and also received a certificate of good performance in his early years of work. However, the analysis of his slide preparation during the last three years revealed poor performance. This information confirms the perception that he wants to keep the volunteer status for his own social benefit, not for the sake of helping other villagers.

Sri is an example of a person who would join any activity if there were an opportunity to take advantage of it. His main reason for staying on is the received recognition from the community as a semi-official person so that he can do his own business. Based on his character and information obtained from his neighbors, it can be said that Sri's active record of blood smears in the early years was done in his own interests and was not really concerned with malaria case detection.

Case III : Mr Boon

Mr Boon identifies himself as a folk healer. He is 58 years old and received his basic treatment knowledge when he was recruited into the Military Medical Unit. After military service, he came back to his village and started his career as a folk healer. He was rather poor with young children to look after.

He was very pleased when the malaria officer selected him as a volunteer. He says that people trust him more in his healing career after he was recruited and he receives more patients and has eventually increased his income. The blood smears and presumptive treatment are provided free from the government, but he is accused by villagers of accepting a fee for these services. Boon has been a malaria volunteer for more than ten years and is proud to say that he has the ability to correctly diagnose malaria cases even without blood examination. He has frequently prescribed modern medicines, such as an injection with an antipyretic or antimalarial drug, to treat malaria cases based on his own diagnosis. Glucose and other intravenous drugs have also

been used. His medical bag always contains antibiotics such as penicillin, streptomycin and steroids for injections. He also has a few beds for the temporary admission of patients at his house. Boon usually charges a fee for the whole course of the treatment rather than for each visit separately. Half of the fee has to be paid in advance, the rest is to be paid after recovery. He also admits that he has had patients who were hypersensitive to drugs or who have had severe side effects from his treatment. He claims that complicated cases are referred to the district hospital for proper treatment.

Boon is an example of a folk healer-volunteer who practices beyond his ability and his role as a volunteer. He administers strong and dangerous medicine to build up his income which he badly needs for his family. He perceives that the knowledge obtained from being in the Military Medical Unit is good enough to be a general practitioner.

Case IV : Mr Thong

Thong, age 50, is not a folk healer and presented himself to be a malaria volunteer. He has also been a volunteer for more than ten years. His income is average for his community and his main occupation is cattle raising. He attended the training course before appointment as a volunteer and later on, also received a certificate of good performance. He always uses his evening time to walk around the village and inquire about sick people. He never charges his clients and believes that if every one helped each other there would be happiness in the community.

Thong is an example of a good non-folk healer-volunteer who is willing to help the community. He performs his role as a malaria volunteer very well. It is not uncommon to identify such a man in any rural community of Thailand. However, it may be difficult to retain him in the volunteer system for a very long period of time.

Case V : Mrs Boaloy

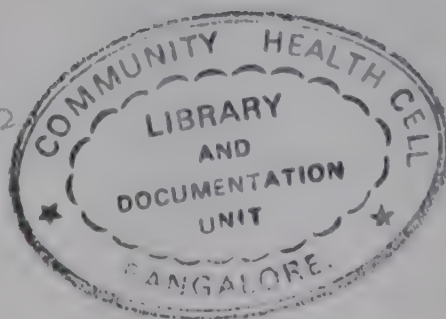
Boaloy, age 35, is a food seller at the local school. She was recruited as a malaria volunteer less than five years ago. She admits that being a volunteer is not the kind of job that she likes to do and that she became a volunteer only because of the strong request of the malaria officers. She says she would like to quit, but the officer will not allow her to do so. As a result, no smear has ever been prepared by Boaloy during her time as a malaria volunteer, and she says that the drugs provided by malaria workers for suspected cases have very often been used by her and her own family.

This is an extreme case of the compulsory volunteer in this system. Boaloy did not want the job, but was forced to keep it, resulting in an inactive volunteer. Perhaps, the reason the malaria officers did not allow her to drop out was because they did not want to waste their time to identify other people to take this responsibility. The case of Boaloy raises the question of whether it is less of a risk for a community to have an inactive volunteer than a very active folk-healer volunteer who charges high fees and treats with dangerous drugs.

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CHAPTER 6

ATTITUDES OF THE COMMUNITY TOWARD MALARIA VOLUNTEERS

In order to investigate the attitudes and perceptions of villagers to malaria volunteers, 50 percent of the villages in the present study were chosen. One villager in each of these villages was selected by using judgmental sampling and was interviewed with the structured questionnaire, making a total of 135 respondents.

6.1 Socio-Economic Characteristics

In the study groups, 57 percent were male and 43 percent were female; 75 percent were over 30 years old and 84 percent were farmers. Grocery owners and laborers were the minority, comprising around 4 percent and 11 percent respectively (Table 10).

6.2 Attitudes and perceptions of villagers to malaria volunteers

Almost all (99%) respondents knew malaria volunteers in their own village and 92% said that they had used this local service at least once. The main reason was that the service was free of charge. The majority of them (84%) did not want to be volunteers themselves, although they rather liked (47%) the idea of their relatives providing the service (Table 11). The main reason for rejection of volunteer work themselves was that they did not have time. Other reasons included insufficient knowledge, old age or ill health. Those who would agree to work as volunteers gave the reason that they wanted to help other people and acquire some knowledge. Those who objected to a relative being a volunteer gave reasons similar to those for not volunteering themselves - that their relatives would not have time or sufficient knowledge to do the job. On the other hand, some villagers said they would like a relative to be a volunteer because it would be convenient to visit them or easy to talk to them.

Table 10 Socio-economic characteristics of villagers

	%
<u>Gender</u>	
Male	57
Female	43
Total	100 (N = 135)
<u>Compulsory Education</u>	
Incomplete	26
Complete	66
Higher	8
Total	100 (N = 135)
<u>Age</u>	
16-30	25
31-40	35
41-50	13
50+	27
Total	100 (N = 135)
<u>Main occupation</u>	
Farmer	84
Merchant	4
Employed	11
Other	1
Total	100 (N = 135)

Table 11 Villagers' Acceptance of Malaria Volunteers

	%
<u>Know a volunteer</u>	
No	1
Yes	99
Total	100 (N = 135)
<u>Ever used volunteer services</u>	
No	8
Yes	92
Total	100 (N = 135)
<u>Reason for using volunteer</u>	
Close to home	3
Free service	80
Other	17
Total	100 (N = 125)
<u>Want to be a volunteer</u>	
No	84
Yes	16
Total	100 (N = 135)
<u>Like a relative to be a volunteer</u>	
No	53
Yes	47
Total	100 (N = 135)

6.3 Perceptions of Villagers to Folk Healer Service

More than half of the villagers (67%) said that they had used folk healers to solve their health problem on at least one occasion. The reasons given included familiarity, convenience, low cost, and the offer of home visits. It should be noted also that another 14 percent of the villagers used folk healer services because of their perceived need for an injection (Table 12). A small number (6%) indicated that they knew of complications resulting from treatments of these folk healers. These responses reflect the importance the users place on personal convenience.

Table 12 Villagers' perceptions of folk healer service

	%
<u>Use folk healer services</u>	
No	33
Yes	67
Total	100 (N = 109)
 <u>Reason for using folk healer services</u>	
Familiar	16
Cheap	20
Have service at home	23
Need injection	14
Close to home	23
Other	4
Total	100 (N = 73)
 <u>Heard about complications</u>	
No	94
Yes	6
Total	100 (N = 135)

6.4 Who should be a volunteer?

When asked about the right kind of person to be a volunteer, the majority of villagers (76%) considered folk healers to be appropriate volunteers (Table 13). This may be based on their perception of folk healers as people they are familiar with and whose services are very convenient to use. The belief that folk healers were the best people in the community to handle health problems, either malaria or other diseases, is reflected by the frequent utilization of their healing services.

Table 13 The right person to be a volunteer

<u>Who should be a volunteer</u>	<u>%</u>
Folk healer	76
Same	12
Villager	12
Total	100 (N = 135)

CHAPTER 7

DISCUSSION

It is difficult for governments, particularly in developing countries, to provide health services for all their people. Recognising that many preventive measures, and promotive and curative procedures do not require extensive professional training, the concept of community participation, where individuals and families assume responsibility for their own health has been developed. According to this concept, local people are supposed to cooperate with professional health workers in dealing with their own community health problems. This collaboration involves a number of steps, beginning with the identification of community health problems and needs. This has to be done largely by the community, with health workers acting as resource persons and providing guidance and technical knowledge. When community health problems are identified according to the community's own priorities, it is believed that the community will be committed to the elimination of these problems through their own efforts. Local contribution plays an important part in providing the necessary manpower and facilities to bring health services in line with the community's perceived needs. One of the guiding principles in this approach is the utilization of village health workers (Ahaned 1980; Djukanovic and Mach 1978; Donoso 1978; Laoye 1981; Rifkin 1980; Robinson 1981; Sterkey 1980; UNICEF 1981; White 1982; WHO 1983).

Many countries have realized the significance of community involvement and recognized that community participation offers the chance to provide cost effective health services. Several types have been organized and tested in a number of developing countries (see Manderson 1992). The village malaria volunteer scheme in Thailand was probably the first large scale program in which people were recruited to share, with professional staff, responsibility for case detection of infectious diseases. It has been tested since 1961 in Chiangmai Province, north Thailand. The project has been very successful, as evidenced by the increased coverage of malaria case detection (Chitprarop 1982). Since then, village malaria volunteers have been established in most rural villages in Thailand. In 1988, there were 41,717 volunteers stationed in 35,647 villages (Malaria Division 1989).

The main activity of village malaria volunteers is case detection by taking blood smears from suspected persons. The slides are collected and examined by malaria workers at malaria clinics, while the patients receive presumptive treatment from the volunteers. In this role, in 1987, village malaria volunteers contributed free of charge, to 18 percent of the case detection in the whole country (Malaria Division 1988). This activity was done at the door step of the villagers and resulted in substantial savings to them in terms of time and money. Without this participation, the Thai government would have had to spend much more resources to achieve such an extensive coverage.

Though the malaria volunteer program is practicable, there are also problems, including the high drop-out rate, inactive volunteers and the question of the appropriate role of folk healer volunteers. Several reasons for dropping out have been identified such as, the selection process, lack of family help, low rates of malaria transmission, and inconsistent supervision (Okanurak 1986). Past studies have also suggested that volunteers who also were folk healers were very active in their volunteer performance.

In the present study, the role of folk healers as malaria volunteers was studied in the Malaria Sector 7, Zone 1 in Chiangmai Province. It was intended to explore if there were advantages in recruiting folk healers into the health services, as well as any problems incurred by this strategy. Among 246 volunteers, 113 or 46 percent were folk healers. The socio-economic characteristics between the two groups were not greatly different, although folk healer-volunteers were, in general, older. As mentioned earlier, it takes several years before a person is accepted by the community as one who is able to handle their ailments.

When the number of blood slides made during the past three years was used as an indicator of performance, folk healer volunteers were more active than non-folk healers. In addition, the folk healers served the community beyond their assignment by wandering around the villages and looking for suspected cases. Very often, they would also carry the blood slides to the malaria clinic and return with radical treatment to cure the victims. Their performance was more accepted by the community because they demonstrated their enthusiasm to serve the community. This kind of positive performance was demonstrated in the case study of Mr Porn in Chapter 5.

Perhaps the best way to justify the merits of folk healer volunteers is from the opinion of the community. In this study most villagers (76%) felt that the folk healer was the appropriate choice to be the malaria volunteer in their villages. This finding is similar to one in Lee District of Lampoon Province, north of Thailand (Okanurak 1986). The acceptance by the villagers of folk healer volunteers may be because folk healers usually deal with sickness and disease and are known or believed to have the ability to administer drugs, including injections. Villagers would prefer to have their finger pricked by someone they have seen handle needles regularly than by someone who has never used a needle before. In addition, villagers are able to complain about their symptoms and discomfort, and receive a sympathetic response from folk healers.

The volunteer is expected to assist in a job without remuneration. Voluntary work is an established tradition in Southeast Asia, where farmers group together to harvest rice, villagers devote their labor to dig a public pond, or to build a house for monks at the temple. However, malaria volunteer work, where voluntary labour is related to official activity, seems slightly different. Indeed, in several countries this type of volunteer work has received some financial reward, for example, Village Health Workers in Bangladesh and the Sudan, the Red Medical Workers in China and the Health Kadre in Indonesia (Djukanovic and Mach 1975).

In long and continuous volunteer tasks, it is probably unfair for volunteers not to obtain something in return. In the early years of the Village Malaria Voluntary in Thailand, the volunteers did not seek remuneration of any kind but, more recently, the Malaria Division has had to provide certain types of incentives. Certificates for good performance and free medical services for volunteers have been offered by the Ministry of Public Health to cope with the problem of retaining volunteers in the program. Some malaria volunteers reported that the reason that they did not drop out of the program is because they received free medical services (Okanurak 1986).

The problem of an incentive is difficult to solve and it will be costly even to provide it in the form of free medical services to all volunteers. The recruitment

of folk healers as health volunteers may be the best strategy to solve such problems. The World Health Organization, has also recommended that the involvement of traditional medical practitioners and birth attendants be explored in the delivery of a primary health care program (WHO 1978). In the present study, this group of healers has, in general, performed the volunteer work well and without expectation of any returns from the government. The return that they do expect is an increase in social standing in the community as medical healers, which will eventually result in more patients.

At this point, it seems that folk healer-volunteers would be beneficial to the malaria surveillance program. However, the recruitment of folk healers into the system may also lead to some disadvantages. Although they worked actively, many have overdone their role. About 90 percent of folk healers said that being volunteers enabled them to earn more from the community in terms of acceptance and income, and they used the training and volunteer status to gain prestige in the villages. Some claimed that they were now trained as village doctors. Others took the opportunity to charge a fee for their own medical services at the time of taking blood smears. In this study, most of the folk healer-volunteers accepted that they have treated the patients with their own medicines. This treatment often used modern and sometimes dangerous drugs.

To assess the risk to the public from the illegal or unlicensed use of drug by folk healers is not easy. Only 24 percent of folk healer-volunteers admitted that they ever came across the problem of drug toxicity or side effects. This problem was confirmed by a doctor at the district hospital who claimed that the hospital had frequently admitted cases of drug sensitivity or severe side effects. The frequency was almost one patient in every month. The tendency to administer sophisticated and dangerous drugs among healers suggests the importance of ensuring that folk healers who are selected as malaria volunteers should be aware of the boundaries of their ability. Otherwise, folk healers may do more harm than good.

It is, therefore, recommended that when folk healers are recruited as volunteers, the danger of using drugs improperly should be included in their training. When they are working, it is also necessary that the malaria workers or health personnel should pay more attention to their other healing activities by close observation and frequent visits. Undoubtedly, if folk healers work within the clearly defined boundaries of their ability, they will fulfill the role envisaged for volunteers.

In conclusion, the malaria volunteer program has made a significant contribution to passive case detection in Thailand. The replacement of drop-out and inactive volunteers must now be done if the system is to be maintained. This study suggests that new volunteers could be recruited from folk healers in the communities. Ideally, they should be healers who are in the middle age group with a stable family and good economic status. They must be humanitarian persons and responsible to their society and patients. It is not easy for outsiders to identify such persons, but recommendations from the villagers themselves may be a good criterion for selection. Villagers will be in a better position to know the habits and behavior of their folk healers than anyone else. Upon recruitment, a training program should be organized which, besides malaria information and slide preparation, should emphasize the danger of using drugs with inadequate knowledge and experience. In addition to training, supervision should be provided on a regular basis. It is not too optimistic to say that folk healers are good malaria volunteers, if they can be guided to work within the scope of their experience and responsibility.

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